How To Obtain Information From United States Patents

U.S. DEPARTMENT OF COMMERCE
PATENT OFFICE

How To Obtain Information from U.S. Patents

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HOW TO OBTAIN INFORMATION FROM UNITED STATES PATENTS

PART I, GENERAL INFORMATION

PURPOSE

A person who is interested in any field of technology may obtain extremely valuable information by keeping informed of developments disclosed in current United States patents. A review of older patents will also provide useful knowledge and some stimulation to the interested researcher.

This pamphlet explains the use of these information sources so that they may be more effectively and widely used.

For information about the sources and prices of U.S. Government publications mentioned in this text see page 18.

BACKGROUND

The patent laws of the United States, in effect for more than 170 years, have been important stimuli in America's remarkable industrial growth. The patent grants to the inventor the right—for a limited period—to exclude others from making, using or selling his invention.

A primary condition an inventor must fulfill, if he is to obtain this patent protection, is that he must fully and clearly describe his invention in his patent application and patent so that others can understand it and know how to use it. This description when published (disclosed) in a patent becomes part of the technical literature available to the public.

More than 3 million United States patents have been granted. These reflect America's industrial growth in every field of technology. About 1,000 new patents each week are added to this vast and invaluable source of applied science[1] and technology, and these many patents add to the stimulus for further progress.

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[1] Readers may not, of course, use features legally protected by unexpired patents without obtaining from the patentee the right to do so. You should obtain advice from your patent lawyer about any question of this nature.

By Subject Matter

To locate patents in this necessarily vast and complex file, the Patent Office has established a highly sophisticated classification system, arranging patents in groups according to subject matter. The system, indexed in the Patent Office *Manual of Classification*, has more than 300 main groupings called "Classes." Each of these is identified by a number and title, e.g., CLASS 1, NAILING, STAPLING AND CLIP CLENCHING. The 300 major classes are further broken down into 60,000 "Subclasses," also identified by numbers and more specific titles, e.g., CLASS 1, NAILING, STAPLING AND CLIP CLENCHING; SUBCLASS 187, MAGAZINE SUPPLY OF ELEMENTS.

Manual of Classification

Printed copies of the Patent Office *Manual of Classification* which give all class and subclass titles and their numbers in the classification system are printed by the Patent Office in looseleaf form and may be purchased through the Superintendent of Documents, U.S. Government Printing Office. (See page 18.)

By referring to the index and the class schedules in this manual, the reader can learn the numbers of the classes and subclasses which contain the patents relating to the subject in which he is interested. Copies of this manual may be purchased [2] or inspected in the Patent Office Search Room in Washington or in libraries in many other places.

[2] See page 18.

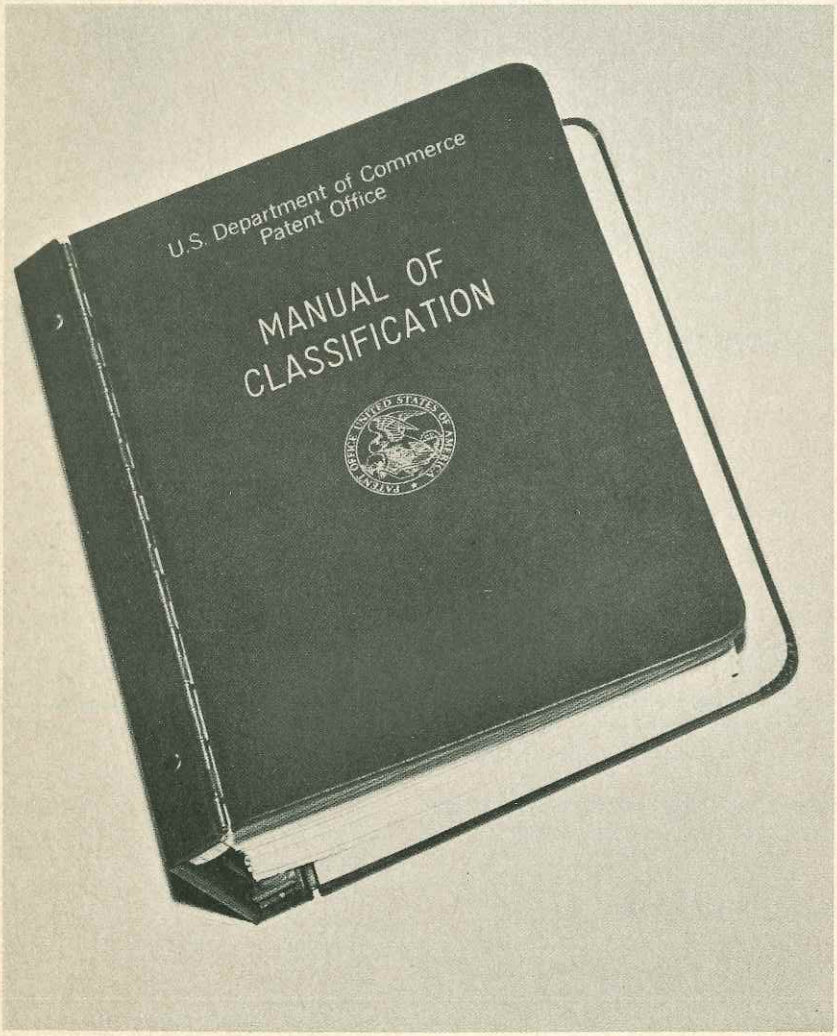


FIGURE 1

PART II, LEARNING ABOUT RECENT PATENTS

GENERAL

The methods used to learn about recent patents are different form those used to find out if your invention is new. To determine the newness or novelty of your invention, a systematic study of patents and other literature in the particular field of your invention is necessary. This is called "searching," and will be discussed in considerable detail in Part III. Here we learn how to obtain information about or from recent patents.

OFFICIAL GAZETTE [3]

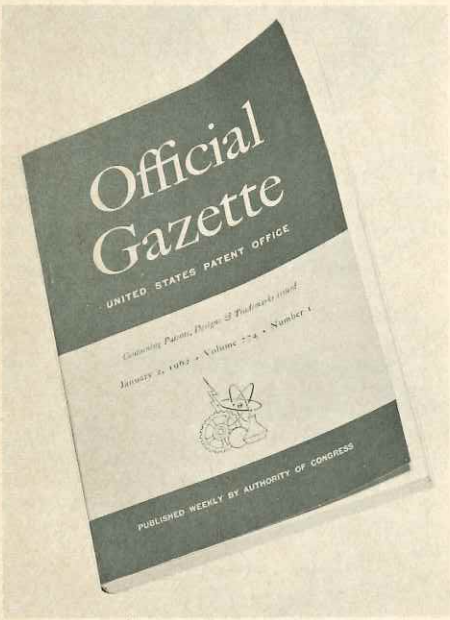


FIGURE 2

The Patent Office issues the weekly publication *Official Gazette* which readily helps the reader to identify, from the many patents issued, those which will interest him the most.

Patent grants are issued every Tuesday, and a brief description of each new patent is printed in the *Official Gazette* which is also issued every Tuesday. This is the first public disclosure of new inventions. In recent months this publication, referred to as the *OG* by the patent profession, has averaged about 1,000 patents per issue.

[3] *Official Gazettes* are maintained in 300 libraries throughout the United States. They may also be obtained on a subscription basis from the Superintendent of Documents, U.S. Government Printing Office.

In using this publication it is very helpful, but not necessary for a person to have knowledge of the Patent Office Classification System. This knowledge can be acquired from the practical weekly use of the *OG* itself.

The *OG* lists new patents in the order of their numerical classification, identifies each patent by subject matter, by class and subclass, and includes the name of the inventor(s) and assignee(s). Some selected, excerpted details of the invention (*What significant claim does the inventor make for his invention?*) are briefly given, and if the patent is illustrated, one fairly representative drawing is included.

Of course there is much more to the patent grant itself than appears in the *OG;* it may run several pages of text and drawings. But to fully record in one weekly publication the contents of each of the more than 1,000 patents granted each week would be a monumental task and its cost prohibitive.

Format and Content of the OG

With a reasonable expenditure of time and effort one will find the latest patents in his field of interest in the most current *OG*. (*Patents bear the same date as the OG in which they are published.*) A review of the past issues, say for the past 5 months or a year, would reveal the recent patents in a searcher's field of interest.

In the forward part of the publication there are usually several important announcements having to do with court decisions, procedural changes, a list of patents available for licensing or sale, etc. Thereafter, the weekly listing of patents is broken down first into four major sections in this order:

GENERAL AND MECHANICAL
CHEMICAL
ELECTRICAL
DESIGNS

Each of these four sections contains many major classes, and these classes appear numerically in each section. Within these classes the patents, in turn, are listed numerically by class and subclass and title.

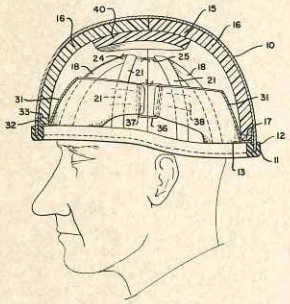
In summary then, the *Official Gazette* is broken down into four sections just as a book may be divided into four chapters; each section is broken down numerically into classes, and these classes are broken down into subclasses.

PATENTS

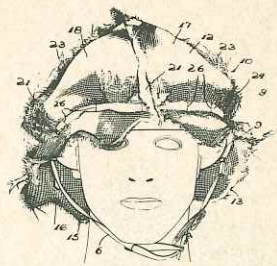
GRANTED JANUARY 2, 1962

GENERAL AND MECHANICAL

3,015,103
SAFETY HELMET
Ted Zbikowski, Detroit, Mich., assignor to Joseph Buegeleisen Company, Southfield Township, Mich.
Filed May 21, 1959, Ser. No. 814,707
6 Claims. (Cl. 2—3)



1. A safety helmet comprising a thin wall outer shell formed of a hard, rigid material and being shaped to fit over the human head with its wall a distance from the head, and hair[illegible] a liner, formed of [illegible] bottom edges and side edge portions, means connecting said side edge portions together in face-to-face relation to provide a generally helmet shaped assembly, said connected side edge portions having substantially long outwardly projecting free edges defined by ragged lines to comprise helmet-profile disguising means in the nature of coarse coxcombs, there being coxcombs extending generally transversely and generally longitudinally of said helmet when said cover is applied thereto, said bottom edges being likewise defined by ragged lines in the nature of coarse coxcombs and extending below said helmet [illegible]er is applied thereto to provide additional



[illegible] the front and re[illegible] respectively; each part having end portions extending around the sides of the helmet, with the two end portions on each side being adjustably secured to each other, said headband parts loosely overlying the liner and all of the straps, whereby when the inner ends of the straps move towards the top of the helmet under load, they bias the headband to pivot inwardly about its bottom edge to closely and tightly embrace the head of the wearer of the helmet.

3,015,104
CAMOUFLAGE COVER FOR HELMETS
Jean H. Crosson, Natick, and Harry N. Khanbegian, Roslindale, Mass., assignors to the United States of America as represented by the Secretary of the Army
Filed Mar. 28, 1960, Ser. No. 18,205
2 Claims. (Cl. 2—6)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A camouflage cover for a protective helmet, comprising four similar sections of flexible material having to fit the con[illegible] with a forwardly [illegible] centrally disposed [illegible] portion defining a channel, said channel adapted to receive a person's nose and providing a passage for air to and from a person's nose and mouth, said channel being open at the bottom of the shell, said shell adapted to extend from the hair line of the wearer down under the chin and from ear to ear, the channel defining portion having opposed generally rectangular side walls and an undulating front wall.

3,015,106
COVERALLS
Henri Van Moer, Malines, Belgium, assignor to S. A. Etablissements Van Moer, Malines, Belgium
Filed Sept. 18, 1958, Ser. No. 761,897
Claims priority, application Belgium July 17, 1958
2 Claims. (Cl. 2—79)

1. In an article of clothing comprising upper, intermediate and lower parts, a pair of front upper sections

11

FIGURE 3

This is a full-scale reproduction of the first page of patents announced in the OFFICIAL GAZETTE of January 2, 1962.

OG Serves Many Purposes

The *OG* serves admirably for a number of practical purposes short of thorough "searching." For the man well versed in his "art," he needs but to turn each week to that section in the *OG* which covers his "art." In this way he keeps himself up to date.

The *OG* is an especially convenient device for identifying patents which are particularly interesting so that full copies of the patents may be obtained. Some scientists, researchers, inventors, the trade and technical press, and segments of industry find this one of the best uses of the *OG*.

For the man not a regular subscriber to the *OG*, and not interested in all the "patented" literature in a particular "art," he can review the issues of the past year-or-so to learn what the general line of development is in that "art." A review in any given field of technology covered in one year in the *OG* is highly revealing and will reward the researcher.

Using the Official Gazette

The first disclosure in the *Official Gazette* of January 2, 1962, is in Class 2. Apparently no patents were announced in this issue in Class 1, which is not unusual.

The first disclosure (fig. 4) in the January 2, 1962, issue of the *OG* falls under the first of the four major sections which we identified on page 3: GENERAL AND MECHANICAL. The patent number 3,015,103 is in the name of Ted Zbikowski, Detroit, Mich., for a safety helmet, and assigned to Joseph Buegeleisen Co., Southfield Township, Mich., presumably the firm that would manufacture the helmet.

Class 2 is for APPAREL. The patent for the safety helmet is issued in Subclass 3 of the APPAREL area, and these appear in the *OG* as (Cl. 2–3). The subclass in this case covers GUARDS AND PROTECTORS, specifically HEAD guards and protectors. Thus we identify an entry in the *OG* which concerns itself with apparel worn to protect the head.

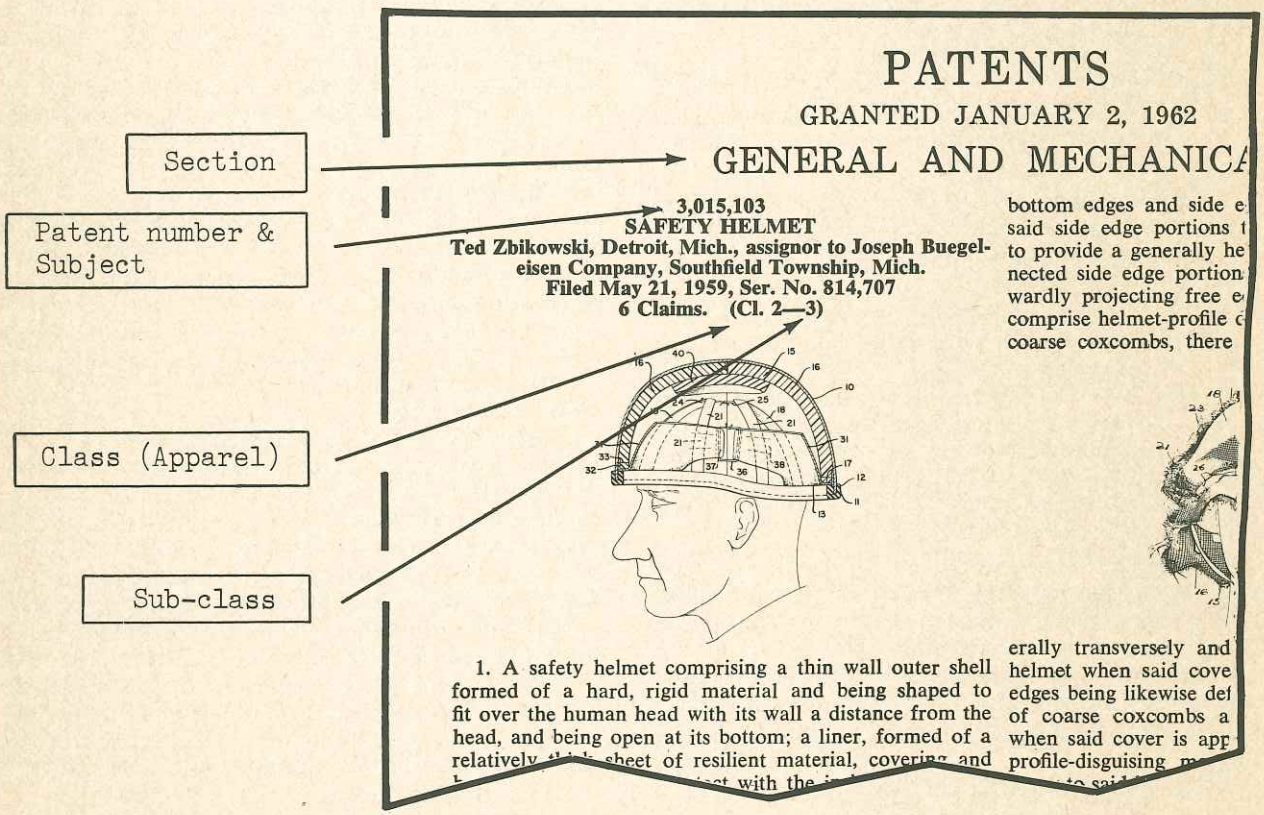

Section
Patent number & Subject
Class (Apparel)
Sub-class
PATENTS
GRANTED JANUARY 2, 1962
GENERAL AND MECHANICA
3,015,103
SAFETY HELMET
Ted Zbikowski, Detroit, Mich., assignor to Joseph Buegeleisen Company, Southfield Township, Mich.
Filed May 21, 1959, Ser. No. 814,707
6 Claims. (Cl. 2—3)
bottom edges and side e
said side edge portions t
to provide a generally he
nected side edge portion
wardly projecting free e
comprise helmet-profile c
coarse coxcombs, there
1. A safety helmet comprising a thin wall outer shell formed of a hard, rigid material and being shaped to fit over the human head with its wall a distance from the head, and being open at its bottom; a liner, formed of a relatively
sheet of resilient material, covering and
with the
erally transversely and
helmet when said cove
edges being likewise def
of coarse coxcombs a
when said cover is app
profile-disguising

FIGURE 4

It is interesting to note that in this issue, beginning with the patent grant for the safety helmet, there are seven grants for new inventions in the APPAREL class. We review here the numbers, classes and subclasses and titles to give you some idea of the diversity in a single "art"—APPAREL—which appears in just seven patents in 1 week.

No. 3,015,103 (Cl. 2–3) Safety Helmet
No. 3,015,104 (Cl. 2–6) Camouflage Cover for Helmets
No. 3,015,105 (Cl. 2–9) Safety Face Mask
No. 3,015,106 (Cl. 2–79) Coveralls
No. 3,015,107 (Cl. 2–115) Flap Construction for Articles of Clothing
No. 3,015,108 (Cl. 2–195) Foldup Style Service Cap
No. 3,015,109 (Cl. 2–302) Supporting Device for Nether Garments

By reviewing these identifications above we immediately learn several things about the *OG:*

(1) Patents are numbered and published consecutively;
(2) The patents listed above, although widely different are all in the field of wearing apparel;
(3) There are many subclasses in Class 2. We deduce from the patent granted for a Supporting Device for Nether Garments (Cl. 2–302) that there are at least 302 subclasses in Class 2. As a matter of fact, there are 331 subclasses in Class 2.

Except for the patent on coveralls, the disclosures in the apparel field in this issue do not tell a clothing manufacturer much about the changing state of the "art" in his field. But for the manufacturer who specializes in safety headgear, there is something to learn. In a single week three patents were granted for this type of apparel.

If inventions in the "art" of safety headgear continue at his rate of three patents per week, one can readily see how, in a single year, the literature of this art grows in quantity and complexity. The clothing designer who had little to gain from this issue may have to wait a few weeks for developments in his special field of interest. He learns to confine his review to that class or subclass in which he is most interested. In this way he singles out the desired subject matter without reviewing patents which are irrelevant to his interest. The difference in the rifle rather than the buckshot approach.

Used in this way, the *OG* serves the special interest of persons or groups just as the daily newspaper satisfies the requirement of the man who is interested in the sports page, the woman who is interested in the society page, the youngster who is interested in the comics, or the teen-ager who is interested in cross-word puzzles. Each knows immediately, from long usage, exactly where to turn in his newspaper. This is the case with the regular user of the *OG;* each knows where to turn for precisely what he wants, and usually has only a casual interest in the balance of the publication.

In another example, a person interested in the latest inventions in street-paving would thumb through the pages of the *OG* until he reaches patents in Class 94. Four new patents in this field were granted on January 2, 1962. He may find enough information in these discosures to satisfy his requirements, or these disclosures may merely have whetted his appetite for more knowledge. If the latter is the case, he can order—for twenty-five cents each—copies of the four patents for the full details and drawings. In this way the *OG* serves to promote ". . . progress in the arts . . ." by disclosing and giving wide circulation to new technology.

CLASSIFICATION OF PATENTS

ISSUED JANUARY 2, 1962

NOTE.—First number=class, second number=subclass, third number=patent number

2— 3: 3,015,103
6: 3,015,104
9: 3,015,105
79: 3,015,106
115: 3,015,107
195: 3,015,108
302: 3,015,109
2: 3,015,
14: Re.25,107
177: 3,015,111
5— 8: 3,015,112
63: 3,015,113
86: 3,015,114
8— 121: 3,015,537
9— 333: 3,015,115
10— 138: 3,015,116
139: 3,015,117
15— 209: 3,015,118
250.02: 3,015,119
258: 3,015,120
311: 3,015,121
327: 3,015,122
3,015,123
16— 43: 3,015,124
82: 3,015,125
168: 3,015,126
18— 2.5: 3,015,127
2.6: 3,015,128
12: 3,015,129
18: 3,015,130
30: 3,015,131
3,015,132
3,015,133

47— 1: 3,015,187
9: 3,015,188
60: P.P.2,117
P.P.2,118
P.P.2,119
48— 180: 3,015,548
49— 19: 3,015,189
54: 3,015,190
50— 100: 3,015,191
103: 3,015,
246: 3,015,
346: 3,015,194
51— 165: 3,015,195
284: 3,015,196
53— 208: 3,015,197
387: 3,015,198
56— 1: 3,015,
377: 3,015,200
3,015,201
3,015,202
57— 93: 3,015,203
98: 3,015,204
143: 3,015,205
58— 28: 3,015,206
3,015,207
142: 3,015,208
60—35.54: 3,015,210
35.6: 3,015,209
39.36: 3,015,211
52: 3,015,212
54.6: 3,015,213
61— 3,015,214

99— 172: 3,015,568
100— 43: 3,015,262
101— 19: 3,015,263
3,015,264
93: 3,015,265
211: 3,015,266
369: 3,015,267
401.1: 3,015,268
3: 3,015,269
7: 3,015,270
14: 3,015,271
16: 3,015,272
18: 3,015,273
34.1: 3,015,274
70: 3,015,275
76: 3,015,276
78: 3,015,277
103— 1: 3,015,
3,015,279
46: 3,015,280
118: 3,015,281
126: 3,015,282
3,015,283
104— 172: 3,015,284
105— 224: 3,015,285
409: 3,015,286
106— 26: 3,015,569
181: 3,015,570
188: 3,015,571
197: 3,015,572

134— 42: 3,015,589
136— 111: 3,015,681
137— 75: 3,015,337
100: 3,015,338
102: 3,015,339
124: 3,015,340
493: 3,015,341
512.1: 3,015,342
623: 3,015,343
624: 3,015,344
138— 31: 3,015,345
139— 52: 3,015,346
207: 3,015,347
144— 2: 3,015,348
318: 3,015,349
145— 94: 3,015,350
148— 1.5: 3,015,590
3,015,591
1.6: 3,015,592
6.15: 3,015,593
3,015,594
150— 52: 3,015,351
153— 1: 3,015,352
32: 3,015,353
73: 3,015,354
78: 3,015,355
154— 46: 3,015,595
50: 3,015,596
53.5: 3,015,597
156— 144: 3,015,599
222: 3,015,598
356: 3,015,

200— 87: 3,015,708
114: 3,015,709
202— 187: 3,015,613
248: 3,015,614
204—154.2: 3,015,615
193.2: 3,015,616
3,015,617
3,015,618
206—45.23: 3,015,383
52: 3,015,384
59: 3,015,385
65: 3,015,386
207— 10: 3,015,387
208— 48: 3,015,619
60: 3,015,549
119: 3,015,620
209— 75: 3,015,388
111.5: 3,015,389
140: 3,015,390
144: 3,015,391
3,015,392
3,015,393
222: 3,015,394
210— 138: 3,015,395
205: 3,015,621
221: 3,015,396
395: 3,015,397
211— 96: 3,015,398
134: 3,015,399
183: 3,015,400
3,015,401

244— 2: 3,015,456
14: 3,015,457
77: 3,015,458
3,015,459
3,015,460
79: 3,015,460
117: 3,015,461
122: 3,015,462
147: 3,015,463
246— 5: 3,015,722
34: 3,015,723
182: 3,015,724
247: 3,015,725
258: 3,015,464
248— 74: 3,015,465
158: 3,015,466
226: 3,015,467
230: 3,015,468
250— 20: 3,015,726
3,015,727
3,015,728
83.6: 3,015,729
202: 3,015,730
213: 3,015,731
251— 331: 3,015,469
252— 8.55: 3,015,622
18: 3,015,623
41: 3,015,624
49.6: 3,015,625
62: 3,015,626
62.5: 3,015,

FIGURE 5

Official Gazette Subclass Lists

There is another technique available to a person interested in knowing about patents issued on any subject. He can turn to a section in the index of the *OG* called CLASSIFICATION OF PATENTS. From this section he can learn how many patents have been issued in a given class or subclass. The classes are identified and the numbers of the newly issued patents in each class are given. This index tells the reader immediately how many patents, if any, have been issued in his special field of interest.

Notice, in figure 5, that the numbers of all the patents issued in Class 2 are given. So are the subclasses given. A person having an interest in this class will learn immediately that the *OG* contains new information for him. But you will also note that no patents were issued in either Class 1 or Class 3. Persons interested in either of these classes will learn immediately from this index that the *OG* offers them no new technology.

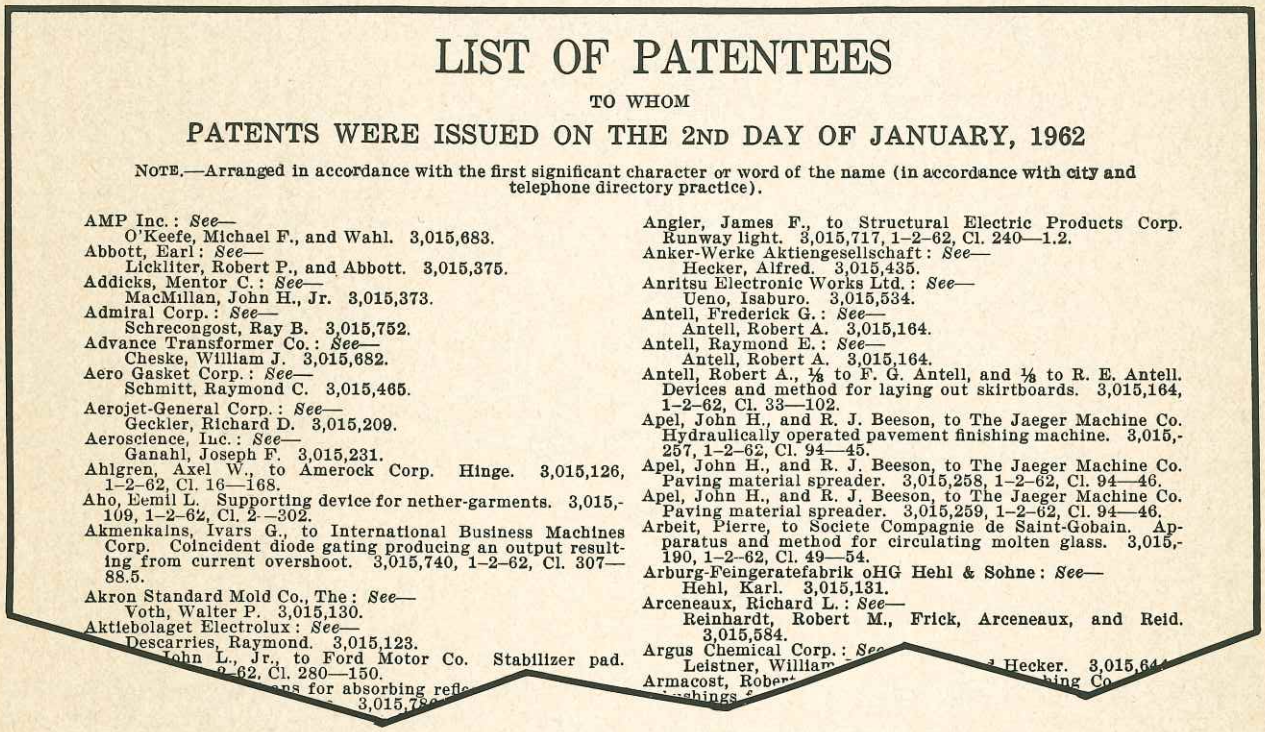
However, those interested in Class 102 (Ammunition and Explosive Devices) will find this an interesting issue, because as shown in this index, this issue contains nine patents in this field.

The reader then may elect to turn to the main body of the *OG* to review each of the patents he located in the index, or he simply may copy the patent numbers and order copies of each of the patents that interest him.

Official Gazette—List of Patentees

Also in the rear of each issue of the *OG* is an alphabetical listing of every patentee to whom a patent was issued during the week, and of every firm or person to whom a patent was assigned (assignee) by the inventor before issuance of the patent. This listing includes the identification of the patents issued in the name of the inventor and to the assignee.

By referring to this part of the *OG* each week, anyone can learn about the patents issued to his competitor, customers, suppliers, or anyone else working in his field of interest, including certain inventors known to be active in special areas of technology. This alphabetical listing, too, serves as an index to the disclosures in the main body of the publication.



LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 2ND DAY OF JANUARY, 1962

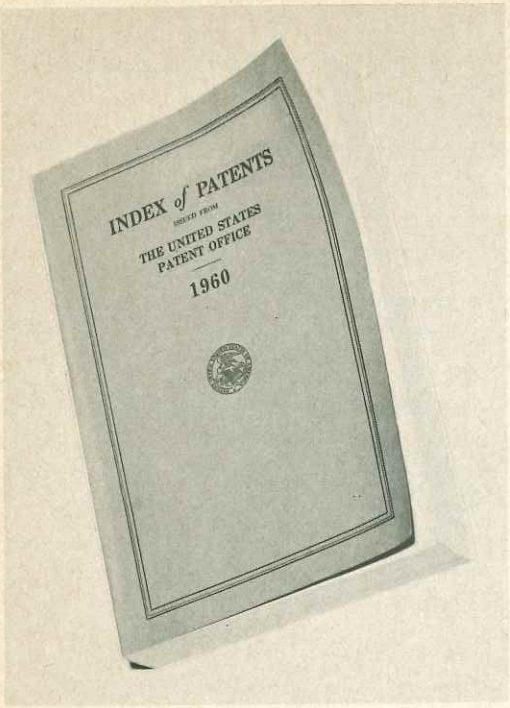
NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

AMP Inc.: *See*—
O'Keefe, Michael F., and Wahl. 3,015,683.
Abbott, Earl: *See*—
Lickliter, Robert P., and Abbott. 3,015,375.
Addicks, Mentor C.: *See*—
MacMillan, John H., Jr. 3,015,373.
Admiral Corp.: *See*—
Schrecongost, Ray B. 3,015,752.
Advance Transformer Co.: *See*—
Cheske, William J. 3,015,682.
Aero Gasket Corp.: *See*—
Schmitt, Raymond C. 3,015,465.
Aerojet-General Corp.: *See*—
Geckler, Richard D. 3,015,209.
Aeroscience, Inc.: *See*—
Ganahl, Joseph F. 3,015,231.
Ahlgren, Axel W., to Amerock Corp. Hinge. 3,015,126, 1–2–62, Cl. 16—168.
Aho, Eemil L. Supporting device for nether-garments. 3,015,109, 1–2–62, Cl. 2—302.
Akmenkalns, Ivars G., to International Business Machines Corp. Coincident diode gating producing an output resulting from current overshoot. 3,015,740, 1–2–62, Cl. 307—88.5.
Akron Standard Mold Co., The: *See*—
Voth, Walter P. 3,015,130.
Aktiebolaget Electrolux: *See*—
Descarries, Raymond. 3,015,123.
[illegible] John L., Jr., to Ford Motor Co. Stabilizer pad. [illegible] 62, Cl. 280—150.
[illegible] for absorbing refle[illegible] 3,015,78[illegible]
Angler, James F., to Structural Electric Products Corp. Runway light. 3,015,717, 1–2–62, Cl. 240—1.2.
Anker-Werke Aktiengesellschaft: *See*—
Hecker, Alfred. 3,015,435.
Anritsu Electronic Works Ltd.: *See*—
Ueno, Isaburo. 3,015,534.
Antell, Frederick G.: *See*—
Antell, Robert A. 3,015,164.
Antell, Raymond E.: *See*—
Antell, Robert A. 3,015,164.
Antell, Robert A., ⅓ to F. G. Antell, and ⅓ to R. E. Antell. Devices and method for laying out skirtboards. 3,015,164, 1–2–62, Cl. 33—102.
Apel, John H., and R. J. Beeson, to The Jaeger Machine Co. Hydraulically operated pavement finishing machine. 3,015,257, 1–2–62, Cl. 94—45.
Apel, John H., and R. J. Beeson, to The Jaeger Machine Co. Paving material spreader. 3,015,258, 1–2–62, Cl. 94—46.
Apel, John H., and R. J. Beeson, to The Jaeger Machine Co. Paving material spreader. 3,015,259, 1–2–62, Cl. 94—46.
Arbeit, Pierre, to Societe Compagnie de Saint-Gobain. Apparatus and method for circulating molten glass. 3,015,190, 1–2–62, Cl. 49—54.
Arburg-Feingeratefabrik oHG Hehl & Sohne: *See*—
Hehl, Karl. 3,015,131.
Arceneaux, Richard L.: *See*—
Reinhardt, Robert M., Frick, Arceneaux, and Reid. 3,015,584.
Argus Chemical Corp.: *See*—
Leistner, William [illegible] Hecker. 3,015,64[illegible]
Armacost, Robert [illegible] bing Co. [illegible]
[illegible]shings [illegible]

FIGURE 6

INDEX OF PATENTS

Annual



The *Index of Patents*, published annually, is a compilation of all patents issued during the previous year. It simplifies the review of a full year's disclosures in any of the classes of patents.

While a week by week review of the *Official Gazette* is generally necessary for those who have the need to keep current on all new patents in their field, this annual index serves admirably in determining what the total patent grants were in a specific field in an entire year.

This annual compilation is designed to make search easier. It has two major divisions:

(1) An alphabetical breakdown of patentees (LIST OF PATENTEES)

(2) A numerical breakdown by class (CLASSIFICATION OF PATENTS)

LIST OF PATENTEES 75

Berg, Jozef T., and A. Larigaldie, to North American Philips Co., Inc. Method of enclosed welding. 2,948,805, 8–9–60, Cl. 219—137.

Berg Mfg. and Sales Co.: *See*—
Dobrikin, Harold L. 2,948,450.

Berg, Martin. Clothesline assembly. 2,950,824, 8–30–60, Cl. 211—119.1.

Berg, Quentin, to AMP Inc. Electrical connector. 2,929,046, 3–15–60, Cl. 339—276.

Berg, Quentin. Multiple applicator. 2,932,826, 4–19–60, Cl. 1—2.

Berg, Quentin, to AMP Inc. Shear means with integral cam surfaces effective to longitudinally shift workpiece to correct shearing position. 2,951,409, 9–6–60, Cl. 83—228.

Berg, Ralph L., to Controls Co. of America. Direction controlling means for self-starting synchronous motors. 2,960,-201, 11–15–60, Cl. 192—4.

Richard D.: *See*—
Paul E., and Berg. 2,955,394.
Western Electric Co., Inc.
clamping

Berger, Sol J., and J. G. Rivenburgh, to Berger-Rivenburgh. Merchandise display device. 2,922,552, 1–26–60, Cl. 222—185.

Berger, Uriah S., and M. Cocchiaro, to Bell Telephone Laboratories, Inc. Integer analyzer and sequence detector. 2,929,048, 3–15–60, Cl. 340—164.

Bergeron, Maurice G. J. Machines for smoothing wood. 2,929,173, 3–22–60, Cl. 51—138.

Bergeson, Raymond L., to Minneapolis-Honeywell Regulator Co. Center of gravity indicator. 2,948,146, 8–9–60, Cl. 73—65.

Bergey, Taylor G. Receptacle and handle for milk cartons and the like. 2,961,121, 11–22–60, Cl. 220—85.

Bergey, Taylor G., to Houston Oil Field Material Co., Inc. Centrifuge system. 2,961,154, 11–22–60, Cl. 233—19.

Bergfeldt, Julius V. Electrode wheel and holder assembly for resistance spot welding machine. 2,929,916, 3–22–60, Cl. 219—120.

Bergfors, Carl A., to International Business Machines Co-
istor tube
hing circuits. 2,935,690, 5–3–
Corp. Ped-

FIGURE 7

Index of Patents—List of Patentees

Anyone wishing to learn what patents have been issued to an inventor or assigned to a firm during the previous year, can turn to the LIST OF PATENTEES in this annual index. The illustration (fig. 8) taken from the 1960 *Index of Patents*, shows how simple it is to determine what patents are held by whom.

Note, in figure 8, the number of patents assigned to AMP, Inc. This indexing, then, not only tells us what patents have been assigned to AMP, Inc., but also tells us who the inventors are. You will note that the first inventor listed under AMP, Inc., is Quentin Berg. By simply thumbing through the alphabetical listings to the *Bs*, we find that Mr. Berg, figure 7, was a fairly prolific inventor with three patents granted to him in 1960. It is also interesting to note that he assigned two of his inventions to AMP, Inc. What reveals itself here is the most thorough and helpful cross-indexing in this publication.

1960
LIST OF PATENTEES

This list includes reissue patentees

Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

AB, A Ekstroms Maskinaffar: *See*—
Jansson, John. 2,942,784.
AB Almex: *See*—
Ståhl, Nils E. J., and Larsson. 2,945,432.
AB Asbrink & Co.: *See*—
Rydberg, John A.. 2,932,845.
AB Ceaverken: *See*—
Sandgren, Axel R. 2,925,766.
AB Davy Robertsons Maskinfabrik: *See*—
Aberg, Hakan. 2,919,965.
AB Flygts Pumpar: *See*—
Englesson, Sixten. 2,950,931.
AB Hedemora Verkstäder: *See*—
Haglund, Gustaf. 2,934,325.
AB Kanthal: *See*—
Schrewelius, Nils G. 2,955,145.
AB Ljungmans Verkstader: *See*—
Eklund, Hans E. 2,951,382.
A.B. Metal Products Ltd.: *See*—
Brown, John K. 2,931,866.
AB Nynas-Petroleum: *See*—
Agren, Per H. W., and Flemmert. 2,949,378.
A B Svenska Flaktfabriken: *See*—
Gustafsson, Stig. 2,936,850.
Gustafsson, Stig. 2,946,400.
Hedbom, Lars. 2,959,981.
Liljenström, Carl-Johan. 2,920,398.
Pellmyr, Bengt. 2,938,712.
AB Svenska Jarnvagsverkstaderna: *See*—
Broberg, Björn E. 2,958,297.
A. Boake, Robert & Co., Ltd.: *See*—
Chatfield, Herbert W. 2,930,708.
ACF Industries, Inc.: *See*—
Anderson, Clifford E., and Eckert. 2,934,036.
Armstrong, James F. 2,943,211.
Armstrong, James F. 2,957,631.
Batt, Ira. 2,953,662.
Berman, Baruch. 2,925,546.
Blodgett, Stewart B. 2,937,858.
Boehlow, Robert W. 2,925,295.
Brown, Morris C., and Highley. 2,920,876.
Caputo, Paul J., and Johnson. 2,919,661.
Carlson, Harold A. 2,925,256.
Carlson, Harold A. 2,942,596.
Carlson, Harold A. 2,965,082.
Carlson, Harold A., and Smith. 2,937,635.
Clade, Robert. 2,942,840.
Coffey, Irven E. 2,926,615.
Coffey, Irven E. 2,965,088.
Combest, John F. 2,926,787.
Conguisti, Dominick R., and Mullane. 2,945,776.
Cook, Forrest W., and Eberhardt. 2,957,685.
Downs, Jesse S., and Pryor. 2,925,993.
[illegible]ns, Jesse S., and Pryor. 2,925,994.
[illegible]: Calvin D., and Sa[illegible] 2,954,960.
[illegible]ssell W. 2,9[illegible]
[illegible]mes F[illegible]
ACF Industries, Inc.: *See*—Continued
Shils, Lee H. 2,948,026.
Smith, Robert J., and Ott. 2,964,303.
Spragle, Thomas D. 2,920,817.
Szwargulski, Alex N. 2,937,755.
Viehmann, Philip J., Jr. 2,963,795.
Whitby, Clyde M. 2,943,402.
Witt, Richard P. 2,965,708.
Young, Henry B., and Bilderback. 2,942,754.
Zomber, Gerard L. 2,946,950.
Zub, Albert W. 2,942,861.
AFN, Inc.: *See*—
Murib, Jawad H., and Grannen. 2,934,566.
AGA-Aktiengesellschaft: *See*—
Hagger, Albert. 2,954,792.
A.G. fur Technische Neuheiten: *See*—
Zippel, Richard. 2,929,608.
A.J. Industries Corp.: *See*—
Zagwyn, Anthony T. 2,957,707.
AM Co.: *See*—
Schwaneke, Alfred E. 2,956,136.
A-M C[illegible]: *See*—
[illegible]Hunyady, Frank, Jr. 2,9[illegible]1,156.
AMP Inc.: *See*—
Berg, Quentin. 2,929,046.
Berg, Quentin. 2,951,409.
Broske, William F. 2,952,174.
Broske, William F., and Laughlin. 2,925,004.
Bucher, Carl H., Crowley, and Folkenroth. 2,939,505.
Bucher, Carl H., and Handel. 2,943,293.
Cobaugh, Robert F. 2,951,228.
Cootes, Harold E., Folkenroth, Fortna, Fuller, and Ullman. 2,954,599.
Crane, Hewitt D. 2,926,329.
Demler, Henry W. 2,947,207.
Duks, Karlis. 2,945,207.
Floyd, Edwin, Jr. 2,930,836.
Fuller, Glenwood A. 2,921,618.
Fuller, Glenwood A. 2,928,299.
Hamlin, Carl B. 2,936,491.
Hammel, Kemper M. 2,945,206.
Hammell, Kemper M. 2,962,807.
Hoffman, Norman E. 2,965,147.
Klingler, Martin L. 2,941,430.
Klingler, Martin L., and Evans. 2,921,438.
Packard, Damon R. 2,965,957.
Smith, Willard A., and Klemer. 2,958,844.
Swengel, Robert C. 2,958,064.
Ullman, Robert, Fortna, Middleton, Schwalm, and Tritt. 2,961,027.
Watts, William S. 2,939,100.
Watts, William S. 2,960,864.
Zeidler, Howard M. 2,959,7[illegible]1.
A-P[illegible] Co.: *See*—
[illegible]ch. Richard E., and Carlson. 2,954,264.
APRA [illegible]'ator Corp.: *See*—
[illegible]936,042.
[illegible]*See*—

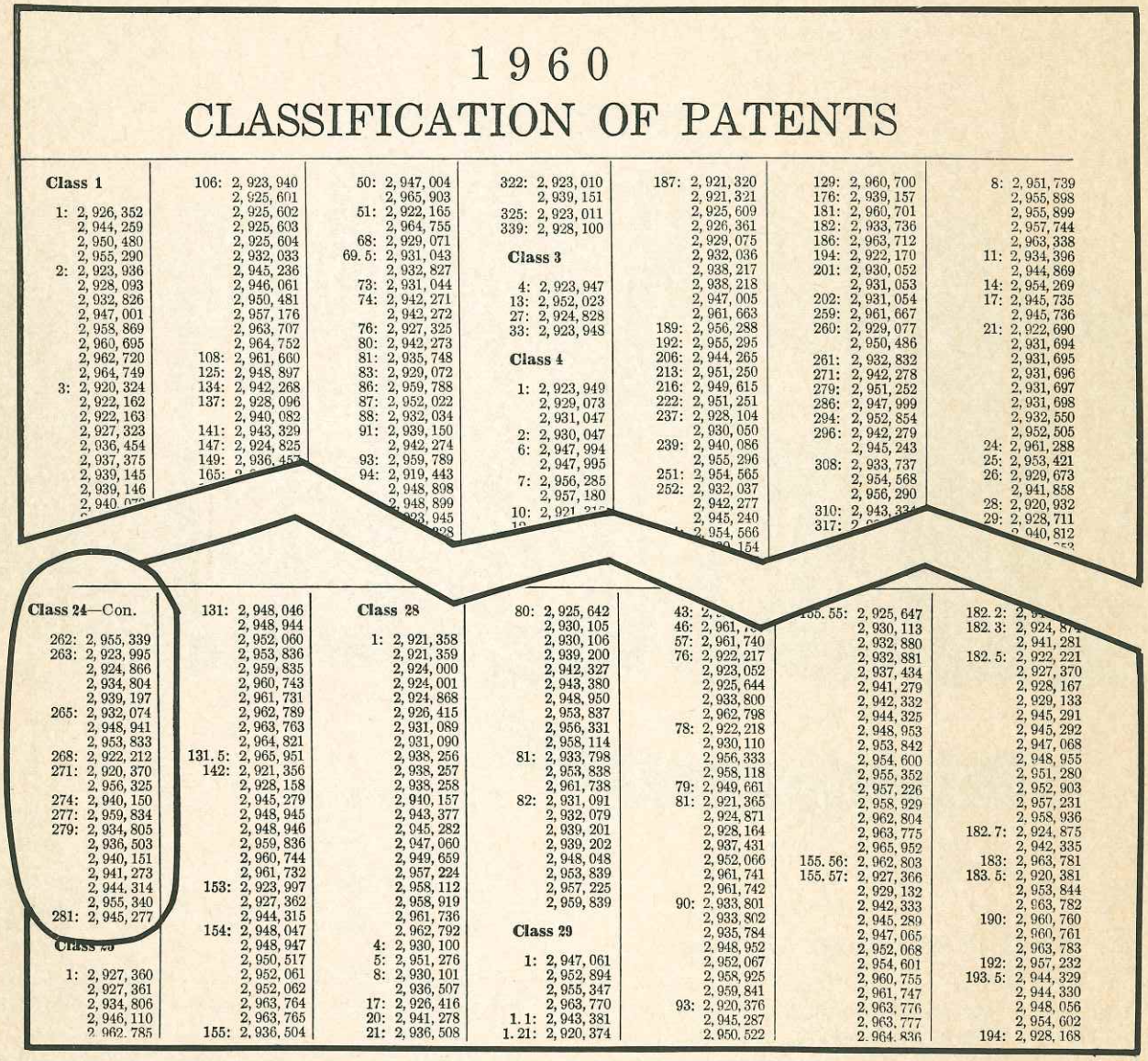
FIGURE 8

Index of Patents—Classification of Patents

For the reader who wants to review patents issued during the entire calendar year in a specific field—say, sliding jaw clasps—he will find the CLASSIFICATION OF PATENTS,[4] figure 9, of the annual index a most useful tool. This index lists the numbers of all patents issued under class and subclass during the calendar year.

Sliding jaw clasps are listed under Class 24 (buttons, buckles and clasps), Subclass 263 (clasps, sliding jaw) with four patents issued in 1960.

[4] This section was not included in the Index of Patents prior to the calendar year 1955.



1960

CLASSIFICATION OF PATENTS

Class 1

1: 2,926,352
2,944,259
2,950,480
2,955,290
2: 2,923,936
2,928,093
2,932,826
2,947,001
2,958,869
2,960,695
2,962,720
2,964,749
3: 2,920,324
2,922,162
2,922,163
2,927,323
2,936,454
2,937,375
2,939,145
2,939,146
2,940,07[illegible]
106: 2,923,940
2,925,601
2,925,602
2,925,603
2,925,604
2,932,033
2,945,236
2,946,061
2,950,481
2,957,176
2,963,707
2,964,752
108: 2,961,660
125: 2,948,897
134: 2,942,268
137: 2,928,096
2,940,082
141: 2,943,329
147: 2,924,825
149: 2,936,45[illegible]
165: 2,[illegible]
50: 2,947,004
2,965,903
51: 2,922,165
2,964,755
68: 2,929,071
69.5: 2,931,043
2,932,827
73: 2,931,044
74: 2,942,271
2,942,272
76: 2,927,325
80: 2,942,273
81: 2,935,748
83: 2,929,072
86: 2,959,788
87: 2,952,022
88: 2,932,034
91: 2,939,150
2,942,274
93: 2,959,789
94: 2,919,443
2,948,898
2,948,899
2,[illegible]23,945
2,[illegible]28
322: 2,923,010
2,939,151
325: 2,923,011
339: 2,928,100

Class 3

4: 2,923,947
13: 2,952,023
27: 2,924,828
33: 2,923,948

Class 4

1: 2,923,949
2,929,073
2,931,047
2: 2,930,047
6: 2,947,994
2,947,995
7: 2,956,285
2,957,180
10: 2,921,21[illegible]
[illegible]
187: 2,921,320
2,921,321
2,925,609
2,926,361
2,929,075
2,932,036
2,938,217
2,938,218
2,947,005
2,961,663
189: 2,956,288
192: 2,955,295
206: 2,944,265
213: 2,951,250
216: 2,949,615
222: 2,951,251
237: 2,928,104
2,930,050
239: 2,940,086
2,955,296
251: 2,954,565
252: 2,932,037
2,942,277
2,945,240
2,954,566
[illegible],154
129: 2,960,700
176: 2,939,157
181: 2,960,701
182: 2,933,736
186: 2,963,712
194: 2,922,170
201: 2,930,052
2,931,053
202: 2,931,054
259: 2,961,667
260: 2,929,077
2,950,486
261: 2,932,832
271: 2,942,278
279: 2,951,252
286: 2,947,999
294: 2,952,854
296: 2,942,279
2,945,243
308: 2,933,737
2,954,568
2,956,290
310: 2,943,33[illegible]
317: 2,[illegible]
8: 2,951,739
2,955,898
2,955,899
2,957,744
2,963,338
11: 2,934,396
2,944,869
14: 2,954,269
17: 2,945,735
2,945,736
21: 2,922,690
2,931,694
2,931,695
2,931,696
2,931,697
2,931,698
2,932,550
2,952,505
24: 2,961,288
25: 2,953,421
26: 2,929,673
2,941,858
28: 2,920,932
29: 2,928,711
2,940,812
[illegible]

Class 24—Con.

262: 2,955,339
263: 2,923,995
2,924,866
2,934,804
2,939,197
265: 2,932,074
2,948,941
2,953,833
268: 2,922,212
271: 2,920,370
2,956,325
274: 2,940,150
277: 2,959,834
279: 2,934,805
2,936,503
2,940,151
2,941,273
2,944,314
2,955,340
281: 2,945,277

Class [illegible]

1: 2,927,360
2,927,361
2,934,806
2,946,110
2,962,785
131: 2,948,046
2,948,944
2,952,060
2,953,836
2,959,835
2,960,743
2,961,731
2,962,789
2,963,763
2,964,821
131.5: 2,965,951
142: 2,921,356
2,928,158
2,945,279
2,948,945
2,948,946
2,959,836
2,960,744
2,961,732
153: 2,923,997
2,927,362
2,944,315
154: 2,948,047
2,948,947
2,950,517
2,952,061
2,952,062
2,963,764
2,963,765
155: 2,936,504

Class 28

1: 2,921,358
2,921,359
2,924,000
2,924,001
2,924,868
2,926,415
2,931,089
2,931,090
2,938,256
2,938,257
2,938,258
2,940,157
2,943,377
2,945,282
2,947,060
2,949,659
2,957,224
2,958,112
2,958,919
2,961,736
2,962,792
4: 2,930,100
5: 2,951,276
8: 2,930,101
2,936,507
17: 2,926,416
20: 2,941,278
21: 2,936,508
80: 2,925,642
2,930,105
2,930,106
2,939,200
2,942,327
2,943,380
2,948,950
2,953,837
2,956,331
2,958,114
81: 2,933,798
2,953,838
2,961,738
82: 2,931,091
2,932,079
2,939,201
2,939,202
2,948,048
2,953,839
2,957,225
2,959,839

Class 29

1: 2,947,061
2,952,894
2,955,347
2,963,770
1.1: 2,943,381
1.21: 2,920,374
43: 2,[illegible]
46: 2,961,[illegible]
57: 2,961,740
76: 2,922,217
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78: 2,922,218
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182.2: 2,[illegible]
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2,945,291
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182.7: 2,924,875
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183: 2,963,781
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2,963,783
192: 2,957,232
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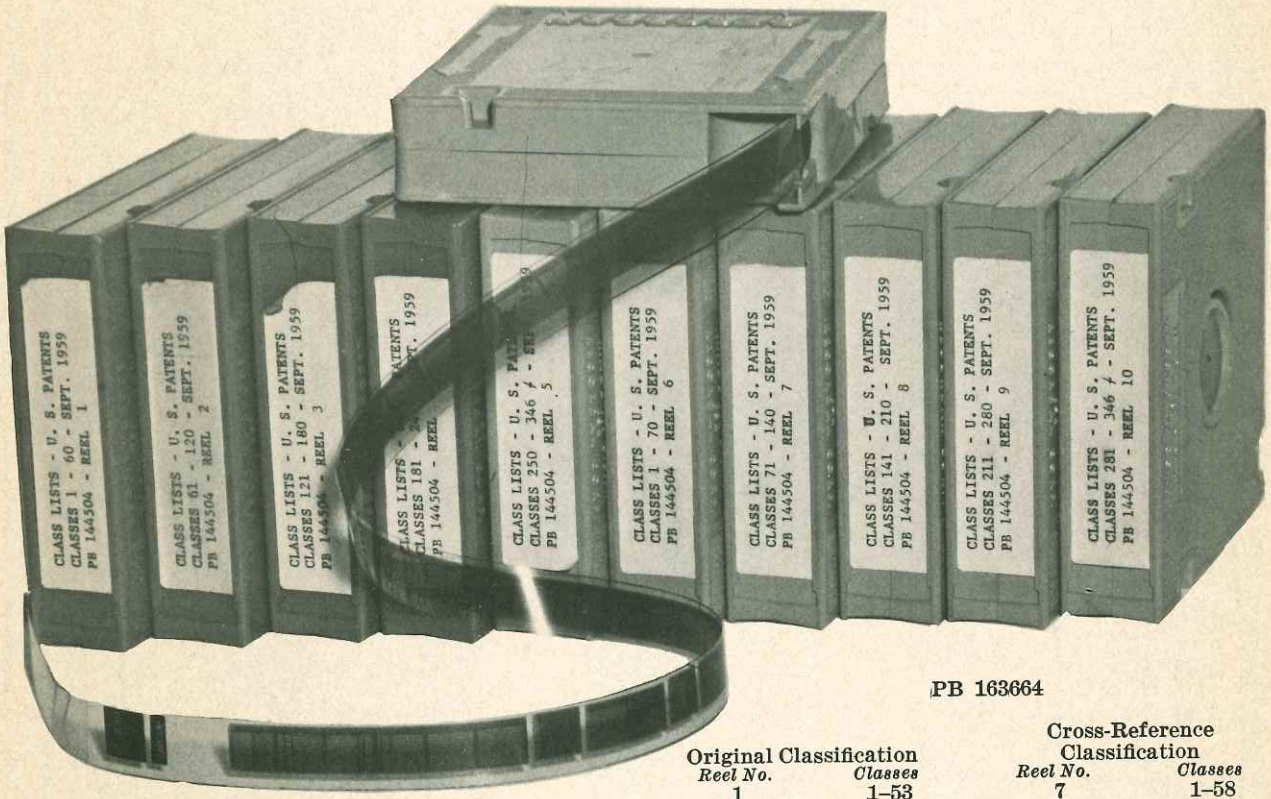
2,954,602
194: 2,928,168

FIGURE 9

MICROFILM LISTS AND PATENT CITATIONS


CLASS LISTS - U. S. PATENTS
CLASSES 1 - 60 - SEPT. 1959
PB 144504 - REEL 1
CLASS LISTS - U. S. PATENTS
CLASSES 61 - 120 - SEPT. 1959
PB 144504 - REEL 2
CLASS LISTS - U. S. PATENTS
CLASSES 121 - 180 - SEPT. 1959
PB 144504 - REEL 3
CLASS LISTS - U. S. PATENTS
CLASSES 250 - 346 - SEPT. 1959
PB 144504 - REEL 5
CLASS LISTS - U. S. PATENTS
CLASSES 1 - 70 - SEPT. 1959
PB 144504 - REEL 6
CLASS LISTS - U. S. PATENTS
CLASSES 71 - 140 - SEPT. 1959
PB 144504 - REEL 7
CLASS LISTS - U. S. PATENTS
CLASSES 141 - 210 - SEPT. 1959
PB 144504 - REEL 8
CLASS LISTS - U. S. PATENTS
CLASSES 211 - 280 - SEPT. 1959
PB 144504 - REEL 9
CLASS LISTS - U. S. PATENTS
CLASSES 281 - 346 - SEPT. 1959
PB 144504 - REEL 10

PB 163664

Original Classification		Cross-Reference Classification	
Reel No.	*Classes*	*Reel No.*	*Classes*
1	1–53	7	1–58
2	54–105	8	59–106
3	106–159	9	107–161
4	160–217	10	162–212
5	218–267	11	213–259
6	268–346	12	260–312
		13	313–346

Microfilm Lists of Patents in Subclasses

Since February 9, 1960, the Patent Office has made available, through Library of Congress Services, microfilm reels listing by class and subclass the numbers of all patents issued on or before December 31, 1962.

Through these lists the reader can learn the numbers of all the patents issued before this date on any subject which interests him. The classes and subclasses listed on each reel are shown in the following index. Orders should give PB number and reel number desired.

Listing of the numbers of the patents in the Design [5] classification is on a separate reel, identified as PB 163665.

It should be noted that the reels include only patent numbers and not the disclosures or titles or even the names of patentees. However, by noting the patent numbers, any person can then refer to disclosures of the patents in the *Official Gazette*, or to patent copies, as discussed above.

[5] Patents for ornamental designs of articles of manufacture.

INFORMATION FROM KNOWN PATENTS ABOUT RELATED PATENTS

The references cited by the patent examiner at the end of each patent are helpful tools for the reader in learning more about the patented subject matter. These references are those which the examiner uncovered in his search to determine the patentability of the applicant's claims. These may include references to other United States and/or foreign patents and pertinent technical literature.

These references have been listed at the end of all patents since February 4, 1947. To get the same reference material or citations for patents issued before that time, a searcher may refer to the correspondence files record of the patents he is interested in. These are called the "patented files" and they are available in the Record Room of the Patent Office.

For reasonable fees the Patent Office will inspect these files on request and report the patent and literature citations to correspondents.

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Copies of United States patents may be purchased from the Patent Office for 25¢ each, except Design patents which are 10¢ each. Copies or foreign patents and technical literature of which readers obtain knowledge from patented files and other sources may also be purchased from the Patent Office, but these are more expensive than United States patent copies, due to the cost of reproducing them.

Subclass Subscription

A subscription may be entered for future patents to be issued in sub-classes by payment to the Patent Office of a deposit and a service charge. Through such subscription, the subscriber receives, as they issue, patents in fields in which he is interested. For the cost of such subscription service a separate inquiry should be sent to the Patent Office.

United States Patent Office

2,822,048

Patented Feb. 4, 1958

1

2,822,048

PERMANENT WELL COMPLETION APPARATUS

Gilbert H. Tausch, Houston, Tex., assignor, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N. J., a corporation of Delaware

Application June 4, 1956, Serial No. 589,333

14 Claims. (Cl. 166—114)

This invention is directed to permanent well completion apparatus for producing, wor[illegible]nd servicing [illegible]drocarbon[illegible]

[illegible]bers, sa[illegible]ric tubing member [illegible]ng continuous and open at both ends, anchoring means connected to the upper ends of said concentric tubing members for suspending said concentric tubing members in said tubing, sealing means positioned on said outer concentric tubing member adapted to seal off the annulus between said outer concentric tubing member and said tub-

2

Referring to the drawings:

Fig. 1 is a cross section of a well bore having the apparatus arranged therein for production from upper and lower productive intervals;

Fig. 2 is a cross section of a well bore similar to Fig. 1; however, herein cross over apparatus is provided;

Fig. 3 is a cross section of a well bore having the apparatus arranged therein for working over a lower productive interval;

Fig. 4 is a cross section of a well bore having the apparatus arranged therein for working over an upper productive interval;

Fig. 5 is a sectional view of a plug member employable in the arrangement of the apparatus of Fig. 4.

Referring more particularly to the drawings[illegible]

References Cited in the file of this patent

UNITED STATES PATENTS

1,262,107	Sheasley	Apr. 9, 1918
2,760,578	Tausch	Aug. 28, 1956
2,772,738	Tausch	Dec. 4, 1956

FIGURE 10

Value and Methods of Searching

Up to this point we have considered methods for obtaining information from patents, and the methods for identifying patents of interest. Now we learn about "searching." This is the type study necessary—

(1) To find out if an invention or innovation is patentable; if it would infringe a patent owned by someone else, or to find out if an existing patent is truly valid.
(2) To find out what others have done or described which may be similar to an invention of one's own.
(3) To learn about developments in a particular line.

This requires a thorough study of a considerable number of patents which are pertinent to the specific subject of inquiry or investigation.

Some searches are made by professionally qualified persons (patent attorneys and agents), and others by the inventor himself or other professional people who want to obtain technical information, but competent patent counsel should be employed to direct or conduct a search to determine the patentability of an invention, to determine if it infringes another's right, or if an existing patent is valid.

It is possible for one to make his own "search", but competent patent[6] counsel is recommended in order to obtain reasonable assurances of the correctness of the legal conclusions resulting from the search.

On the other hand, searches merely to learn of other patents related to one's own invention, or to find out about developments in a field of interest, may advantageously be made by anyone, provided he has the sound judgment to obtain legal advice, if the need develops, instead of attempting to draw legal conclusions himself. A searcher may find that his cherished idea is not after all, as new as he thought, but that someone else has already developed the idea into a patentable invention.

This type of research saves time, money and effort; avoids embarrassment and frustration. On the other hand, the researcher may discover in his search a device which strikes a responsive chord in him, something which may suggest that an innovation or improvement can be made to some bit of modern technology. In these ways, the value of searching is inestimable.

A view of the stacks in the Public Search Room, U.S. Patent Office, where more than 3 million patents are available for review.

[6] A roster "Patent Attorneys and Agents Available to Represent Inventors Before the U.S. Patent Office" may be purchased for 55 cents from the Superintendent of Documents, U.S. Government Printing Office.

FACILITIES AND TECHNIQUES FOR SEARCHING IN WASHINGTON

Searching in the Patent Office

The ideal place to make a patent search is the Public Search Room of the Patent Office, 14th and E Streets NW., Washington, D.C. This is the only place where all United States patents are arranged by subject matter. Here the searcher will first refer to the *Manual of Classification* to help him decide what subclasses to search, and he will then remove the selected subclass bundles of patents from their open stack arrangement, take them to a desk and inspect or read them in their chronological order.

Public Search Room in Patent Office

The most important feature of the Patent Office Search Room is the arrangement of all United States patents in groups according to the class and subclass titles of the *Manual of Classification.* This arrangement enables anyone to browse or search all patents in any field of invention directly and consecutively in the order of historical development of that field. As indicated in the preceding section, the searcher first refers to the *Manual of Classification* to learn the subclasses covering the subject matter to be searched, and he then obtains the subclass bundles of patents from their open stack arrangement and reviews them in their chronological order at a desk in the Search Room.

Use of Manual of Classification and Classification Bulletins

The copies of the *Manual of Classification* available in the Search Room provide a number of features to assist the searcher to find the correct classification. These features include a listing of classes under five major headings and a number of subheadings; another listing, in alphabetical order of class schedules giving titles of the classes and subclasses, and a general alphabetical index.

Classification Bulletins, available in the Search Room, supplement the *Manual of Classification* by giving definitions and descriptions of the types of patent disclosures in the classes and subclasses, and by suggesting other classes and subclasses into which a search should be extended. If the searcher cannot decide what subclasses to search from reading the manual or bulletins he can receive help from the head of the Search Room or one of his assistants.

Search Room Index of Patentees

There is an alphabetical card index in the Search Room giving the names of inventors of all patents issued from 1931 [7] to the present date, and of the assignee of record at the time the patent was granted. If a searcher has difficulty in finding out from other sources what subclasses his search should include, and he knows of companies or individuals who probably have obtained patents in the field he wishes to search, he can learn the numbers and titles of the patents from the card index described in the following paragraph, and compare this information with the class and subclass titles in the *Manual of Classification*. In this way he can learn what subclasses to search, or can extend his field of search as developed from other information.

Search Room Numerical Classification Index

The Search Room also contains a card index in which every issued patent is listed by number with information of the class and subclass under which the patent is classified. From this index a person who has learned from any source the number of a patent relating to the subject he wants to search may find out the classification of the patent, and thus be guided to the classification where other related patents will be found. After obtaining class and subclass information in this manner, the searcher should refer to a copy of the *Manual of Classification* and *Classification Bulletins* in the Search Room to find out if there remain other pertinent subclasses which also should be searched.

Original and Cross-Referenced Patents

If a patent discloses subject matter classified in two or more subclasses, a copy is placed in each subclass. To distinguish these copies from each other, the copy placed in the subclass selected as the principal basis of classification is called an "original", and all others are called "cross-references." Both "original" and "cross-reference" patents are contained in numerical arrangement in the bundles in the Search Room.

Obtaining Leads for Searching From Cross References and Search Notes

When a subclass is being searched and a "cross-reference" patent in that subclass is found to be pertinent, the numerical index discussed above should be consulted to learn the "original" classification of the patent. Then the *Manual of Classification* should be studied to learn if the search should be extended into this and other subclasses. Printed cards in the subclass bundles provide search notes which also serve as guides to possible extension of the field of search.

[7] Similar information for earlier years may be obtained from the bound volumes of *Index of Patents*.

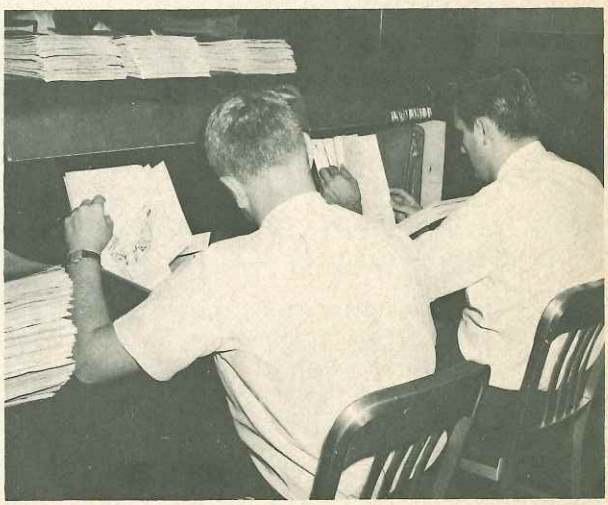
Obtaining Information From Patented Files

The Patent Office Search Room also includes a Record Room, and the "patented files," which are the correspondence records of issued patents, may be inspected in that room. If a searcher knows or discovers a pertinent patent, he can obtain the patented file, read the official actions and responses as well as the informal search notes. He can also note the citations of United States patents, foreign patents and technical literature, and the subclasses searched by the Patent Office examiner. He then can read the cited United States patents in bound volumes arranged numerically in the Search Room, and read the foreign patent and technical literature citations in the Patent Office Scientific Library, adjacent to the Search Room.

Through the numerical index, he can learn the classes and subclasses in which the United States patent citations are classified, compare this subclass knowledge with the *Manual of Classification*, and decide whether he should extend his search into these subclasses, and into other subclasses searched by the examiner.

Patent Office Scientific Library

The Scientific Library of the Patent Office has many books, periodicals, documents, advertising circulars, catalogs, etc. This material is arranged in systematic order suitable for searching. Many abstracting journals such as *Chemical Abstracts* are available, and patent numbers may be noted from this technical literature and used as a guide to the subclasses which should be searched, by identifying these subclasses as discussed above. The library also has more than four million foreign patents. The library staff will assist searchers by explaining the use of this material.



Patent searchers using the files of the public search room. more than 400 patent attorneys or agents use this room daily.

Patent Copy Libraries

A search may be made in any one of the 22 libraries (Part IV page 19) [8] which have numerically arranged sets of United States patents, but in doing so there are some differences and complications as compared to Washington searching.

Unlike the files in Washington, the patent copies in these libraries are in bound books in numerical arrangement, and are not separated into classes and subclasses by subject matter. Because of this, the searcher must take two steps which are unnecessary in Washington searching.

After learning what subclasses to search, he must first obtain or make lists of the patents in these subclasses. He may order these lists from the Patent Office at 30 cents per page (specify what is wanted; original copies, or original and cross-reference copies. We suggest both). Or he may copy these lists from the microfilm reels described in Part II, provided the library has these reels. Having obtained the lists, he will then remove the books from the library shelves one by one in order to see the individual patents listed. Only in Washington can he review the patents directly from subclass bundles drawn from the open stacks in the Search Room.

Official Gazette Libraries

There are over 300 libraries which have bound volumes of the *Official Gazette*. Many of these sets include *Official Gazette* disclosures of all patents issued since 1872, and they may be used for searching in the same general manner as the 22 libraries with patent copies.

Use of Index of Patents for Recent Subclass Lists

Lists of patents issued since 1954 may be obtained without the need to order them from Washington or copy numbers from microfilm reels. The annual volumes of *Index of Patents* for these years contain under the heading "Classification of Patents" all patents issued during the year in every subclass. It is, therefore, possible to conduct a search based on these volumes provided it is limited to these recent years.[9]

[8] The exception is the Sunnyvale, Calif., Public Library where the patents are filed in their classified rather than their numerical order.

[9] However, this method is subject to error if the subject matter of the patent has been reclassified after the patent is issued. On request, the Patent Office will supply information about the current classification of any patent.

Searching Patents From Subclass Lists

The next step after obtaining or making a list of patent numbers will be to inspect copies of the listed patents. These patents may be purchased by direct order from the Patent Office, but this may prove quite expensive if there are many patents in the subclass. Searchers will therefore ordinarily prefer to inspect the patent copies or their Official Gazette disclosures in libraries and select for purchase only those which they find to be pertinent to their interest.

Use of Cross-Reference Lists as Further Search Guides

Searchers are advised to search the patents listed on "cross-reference" lists as well as patents in the "original" classification. This is important both because of the valuable information that may be obtained directly from these cross-reference patents and because they may suggest further areas of search. When the searcher notes that one of these cross-reference patents is pertinent, he may note the classification of the patent from its heading, compare this information with the *Manual of Classification*, and extend his search accordingly.

Bringing Search Up-to-Date

In order to include in his search the patents issued after the dates of his lists, the searcher should inspect the subclass list on the pages of the *Official Gazette* for the intervening weeks under the heading "Classification of Patents." If he has used lists obtained from the microfilm reels, it will be necessary to bring the lists up to date from December 31, 1962, and he may use the lists in the annual volumes of Index of Patents for 1963 and subsequent years for this purpose.

PART IV, SOURCES OF PUBLICATIONS

The U.S. Government publications mentioned in this text may be purchased from the following sources:

Publication	*Source*	*Price*
U.S. Patent Office Manual of Classification	Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., 20402.	$8.50, including loose leaf change sheets issued from time to time.
Official Gazette of the U.S. Patent Office	----do----------	Annual subscription rate $35.00 domestic, $45.00 foreign, single copies $1.00.
Index of Patents (Annual)--------	----do----------	Price varies from year to year, and a number of issues are out of print; the price is $6.00 for the 1960 volume.
Patents and Inventions—An Information Aid for Inventors	----do----------	15¢.
List of Patent Attorneys and Agents Available to Represent Inventors Before the U.S. Patent Office Arranged by States and Countries.	----do----------	55¢
Copies of U.S. Patents----------	Patent Office, U.S. Department of Commerce, Washington 25, D.C.	25¢ for all patents except design patents, which are 10¢ each. Expedited service including air mail delivery 25¢ per copy additional.
Classification Bulletins----------	----do----------	Price varies with size. Minimum price 10¢.
Subclass lists prepared by Patent Office in response to individual orders.	----do----------	30¢ per page of patent numbers, with 100 patents listed on a page as a maximum.
Microfilm reels of subclass lists----	U.S. Department of Commerce, Clearinghouse for Federal, Scientific and Technical Information (Formerly OTS), Springfield, Virginia, 22151.	$6.00 per 100 foot reel of 16 mm film, $70.00 for entire record including 13 reels, which should be identified as PB 163664. The separate reel which provides classification of design patents is also $6.00 and is identified as PB 163665.

The automatic tabulating machine running off subclass lists of patents on request, a service of the U.S. Patent Office.

PATENT COPY LIBRARIES

United States Patents Numerically Arranged

CALIFORNIA

Los Angeles Public Library
Sunnyvale Public Library [10]

GEORGIA

Atlanta, Georgia Tech Library

ILLINOIS

Chicago Public Library

MASSACHUSETTS

Boston Public Library

MICHIGAN

Detroit Public Library

MISSOURI

Kansas City, Linda Hall Library
St. Louis Public Library

NEW JERSEY

Newark Public Library

[10] Arranged by subject matter.

NEW YORK

Albany, University of State of New York
Buffalo, Buffalo and Erie County Public Library
New York City Public Library

OHIO

Cincinnati Public Library
Cleveland Public Library
Columbus, Ohio State University Library
Toledo Public Library

OKLAHOMA

Stillwater, Oklahoma State University Library

PENNSYLVANIA

Philadelphia, Franklin Institute
Pittsburgh, Carnegie Library

RHODE ISLAND

Providence Public Library

WISCONSIN

Madison, State Historical Society of Wisconsin
Milwaukee Public Library

OFFICIAL GAZETTE LIBRARIES

The following libraries regularly receive the weekly issues of the Patent Office Official Gazette. Many of these libraries maintain these issues in bound volumes:

ALABAMA

Auburn, Auburn University Library.
Birmingham, Public Library.
Normal, Carnegie Library, Alabama Agricultural & Mechanical College.
St. Bernard, St. Bernard College Library.
Tuskegee Institute, Hollis Burke Frissell Library.
University, University of Alabama Library.

ALASKA

Anchorage, Anchorage Community College Library.

ARIZONA

Phoenix, Department of Library and Archives, Attention Director.
Phoenix, Phoenix Public Library.
Tempe, Matthews Library, Arizona State University.
Tucson, Documents, University of Arizona Library.

ARKANSAS

Fayetteville, University of Arkansas Library.
Little Rock, Little Rock Public Library.

CALIFORNIA

Bakersfield, Kern County Free Library.
Berkeley, Documents Department, General Library, University of California.
Claremont, Pomona College Documents Collection, Honnold Library.
Davis, University of California Library.
Downey, Downey City Library.
Eureka, Eureka Free Library.
Fresno, Fresno County Free Library.
Fullerton, Orange State College Library.
Long Beach, Public Library.
Los Angeles, Government Publications Room, University of California Library.
Los Angeles, Serials Division, Los Angeles Public Library.
Los Angeles, Library, University of Southern California.
Los Angeles, School of Law Library, University of California.
Northridge, San Fernando Valley State College Library.
Oakland, Oakland Public Library.
Redlands, University of Redlands.
Richmond, Richmond Public Library.
Sacramento, Documents Section, California State Library.
Sacramento, City Free Library.
San Diego, San Diego Public Library.
San Francisco, San Francisco State College, Social Science and Business Library.
San Francisco, Mechanics Mercantile Library, Mechanics Institute Building.
San Francisco, San Francisco Public Library, Documents Department.
Santa Barbara, The Library, Government Publications Department, University of California, Santa Barbara.
Stanford, Stanford University Libraries, Document Division.
Stockton, Stockton Free Public Library.

COLORADO

Boulder, Government Documents Division, University of Colorado Libraries.
Denver, Denver Public Library, Documents Division.
Denver, Mary Reed Library, University of Denver.
Fort Collins, Colorado State University Library.
Golden, Colorado School of Mines Library.
Pueblo, McClelland Public Library.

CONNECTICUT

Bridgeport, Bridgeport Public Library.
Hartford, Connecticut State Library.
Hartford, Hartford Public Library.
Middletown, Olin Library, Wesleyan University.
New Haven, Yale University Library, Attention Documents Acquisitions.
Storrs, Government Publications Department, Wilbur Cross Library, University of Connecticut.
Waterbury, Silas Bronson Library.

DELAWARE

Neward, University of Delaware Library.
Wilmington, Wilmington Institute Free Library.

WASHINGTON, D.C.

U.S. Department of Agriculture,
National Agricultural Library, Current Serial Records.
Central Library, U.S. Department of the Interior.

WASHINGTON, D.C.—continued

Navy Department Library.
Post Office Department Library, Room 6012.
Public Library, Documents Desk.
Department Library, Department of Health, Education, and Welfare, Room 1436.

FLORIDA

Boca Raton, Florida Atlantic University.
Coral Gables, University of Miami Library.
Gainesville, Documents Department, University of Florida Libraries.
Jacksonville, Jacksonville Public Library.
Lakeland, Park Trammell Public Library.
Miami, Documents Division, Miami Public Library.
Tallahassee, The Library, Florida A. & M. University.
Tampa, University of Tampa Library.

GEORGIA

Atlanta, Atlanta Public Library.
Athens, University of Georgia Libraries.
Augusta, Augusta College Library.

HAWAII

Hilo, Library, Hilo Campus, University of Hawaii.
Honolulu, Reference Section, Library of Hawaii, University of Hawaii Library.

IDAHO

Boise, Idaho State Law Library.
Moscow, University of Idaho Library.
Pocatello, Documents Department Library, Idaho State University.

ILLINOIS

Carbondale, Serials Division, Southern Illinois University Library.
Chicago, Chicago Public Library, Document Department.
Chicago, The John Crerar Library, Acquisitions Department.
Chicago, University of Chicago Libraries.
Chicago, University of Illinois Library (CUD).
Decatur, Decatur Public Library.
De Kalb, Swen Franklin Parson Library, Northern Illinois University.
East St. Louis, East St. Louis Residence Center Library, Southern Illinois University.
Evanston, Documents Department, Northwestern University Library.
Peoria, Peoria Public Library.
Rockford, Public Library.
Rock Island, Rock Island Public Library.
Springfield, Documents Unit, Federal Documents, Illinois State Library.
Urbana, Documents Division, University of Illinois Library.

INDIANA

Bloomington, Indiana University Library, Documents Department.
Evansville, Evansville Public Library.
Fort Wayne, Public Library.
Gary, Gary Public Library.
Indianapolis, Indiana State Library.
Indianapolis, Indianapolis Public Library.
Lafayette, Purdue University Library.
Muncie, Ball State Teachers College Library.
Muncie, Public Library.
Notre Dame, University of Notre Dame Library, Documents Unit, Catalog Department.
Richmond, Morrison Reeves Library

IOWA

Ames, Iowa State University of Science and Technology Library.
Des Moises, Iowa State Traveling Library.
Des Moines, Public Library.
Dubuque, Carnegie Stout Free Public Library.
Iowa City, State University of Iowa Library.
Sioux City, Sioux City Public Library.

KANSAS

Lawrence, Documents Librarian, University of Kansas Libraries.
Topeka, Kansas State Library.
Wichita, University of Wichita Library.

KENTUCKY

Ashland, Ashland Public Library.
Lexington, University of Kentucky Library.
Louisville, University of Louisville Library.
Louisville, Louisville Free Public Library.
Pikeville, Pikeville College Library.

LOUISIANA

Baton Rouge, Government Documents Department, Louisiana State University Library.
Lafayette, University Library, University of Southwestern Louisiana.
Lake Charles, McNeese State College Library.
New Orleans, Law Library of Louisiana, Supreme Court of Louisiana Building.
New Orleans, New Orleans Public Library.
New Orleans, Documents Department, Howard-Tilton Memorial Library, Tulane University.
New Orleans, Southern University in New Orleans Library.
Ruston, Louisiana Polythechnic Institute Library.
Shreveport, Shreve Memorial Library.

MAINE

Augusta, Maine State Library.
Bangor, Bangor Public Library.
Orono, University of Maine Library, Document Depository.
Portland, Portland Public Library.
Springvale, Nasson College Library.

MARYLAND

Baltimore, Johns Hopkins University Library.
Baltimore, Enoch Pratt Free Library.
College Park, Documents Division, University of Maryland Library.

MASSACHUSETTS

Amherst, University of Massachusetts Library.
Boston, State Library of Massachusetts.
Boston, Gift Section, Book Purchasing Department, Boston Public Library.
Cambridge, M.I.T. Libraries, Serials and Journals.
Cambridge, Serials Division, Harvard College Library.
Lowell, Lowell Technological Institute Library.
Lynn, Lynn Public Library.
Medford, Tufts University Library.
New Bedford, Public Library.
Worcester, Free Public Library.

MICHIGAN

Battle Creek, Willard Library.
Benton Harbor, Benton Harbor Public Library.
Detroit, Detroit Public Library, Reference Department.
Detroit, Wayne State University Library, Documents Office.
Detroit, University of Detroit Library.
East Lansing, Michigan State University Library.
Grand Rapids, Grand Rapids Public Library.
Houghton, Documents Division, Michigan Tech. Library.
Kalamazoo, Public Library.
Kalamazoo, Dwight B. Waldo Library, Western Michigan University.
Lansing, Michigan State Library.
Muskegon, Hackley Public Library.
Saginaw, Hoyt Public Library.

MINNESOTA

Duluth, Duluth Public Library.
Minneapolis, University of Minnesota Library.
Minneapolis, Public Library.
Northfield, St. Olaf College Library.
St. Paul, Minnesota State Law Library.
St. Paul, St. Paul Public Library.

MISSISSIPPI

Hattiesburg, The Library, University of Southern Mississippi, Southern Station.
Jackson, Mississippi State Library.
State College, Mitchell Memorial Library, Mississippi State University.
University, University of Mississippi Library.

MISSOURI

Columbia, University of Missouri.
Jefferson City, Lincoln University Library.
Kansas City, University of Missouri, Kansas City Library.
Kansas City, Kansas City Public Library, Documents Division.
Rolla, School of Mines and Metallurgy Library, University of Missouri.
St. Joseph, St. Joseph Public Library.
St. Louis, St. Louis University, Pius XII Memorial Library, Documents Librarian.
St. Louis, St. Louis Public Library.
St. Louis, Reference Department, John M. Olin Library, Washington University.

MONTANA

Bozeman, Montana State College Library.

NEBRASKA

Lincoln, Nebraska State Library.
Lincoln, University of Nebraska Libraries, Receiving Section, Acquisitions Department.
Omaha, Omaha Public Library.

NEVADA

Reno, Government Publications Department, University of Nevada Library.

NEW HAMPSHIRE

Concord, New Hampshire State Library.
Durham, University of New Hampshire Library.
Hanover, Dartmouth College Library.

NEW JERSEY

Atlantic City, Free Public Library.
Bayonne, Free Public Library.
Camden, Camden Free Public Library.
Elizabeth, Public Library.
Jersey City, Free Public Library.
Newark, U.S. Document, Public Library.
New Brunswick, Rutgers University Library, Government Documents Department.
Princeton, Princeton University Library.
South Orange, Seton Hall University Library.
Trenton, Free Public Library.

NEW MEXICO

Albuquerque, University of New Mexico Library.
Santa Fe, Supreme Court Law Library.

NEW YORK

Albany, New York State Library, Gift and Exchange Section.
Brooklyn, Pratt Institute Library.
Brooklyn, Brooklyn Public Library, Documents Section.
Buffalo, Buffalo and Erie County Public Library, Subscription Division.
Buffalo, Lockwood Memorial Library, Acquisitions Department, State University of New York at Buffalo.
Chester, University of Rochester Library, Periodical Department.
Farmingdale, State University Library, Agricultural & Technical Institute,
Glens Falls, Crandall Library.
Ithaca, Cornell University Library, Documents Section.
Jamaica, Queens Borough Public Library, Documents Librarian.
Jamaica, St. John's University Library.
New York, City University of New York, City College Library.
New York, Columbia University Libraries, Documents Acquisitions.
New York, New York Law Institute Library.
New York, New York Public Library, Astor Branch.
New York, New York Public Library, Lenox Branch.
Potsdam, Clarkson College of Technology Library.
Rochester, Rochester Public Library, Edgerton Branch.
St. Bonaventure, St. Bonaventure College Library.
Stony Brook, State University of New York at Stony Brook Library.
Syracuse, Syracuse University Library, Documents Unit.
Troy, Troy Public Library.
Utica, Utica Public Library.
Yonkers, Yonkers Public Library.

NORTH CAROLINA

Chapel Hill, University of North Carolina Library.
Durham, Public Documents Department, Duke University Library.
Greensboro, Agricultural and Technical College Library.
Raleigh, D. H. Hill Library, North Carolina State College.
Raleigh, North Carolina State Library.
Winston-Salem, Public Library of Winston-Salem and Forsyth County.

NORTH DAKOTA

Fargo, North Dakota State University of Agriculture & Applied Sciences Library.
Grand Forks, University of North Dakota Library.

OHIO

Alliance, Mount Union College Library.
Athens, Ohio University Library.
Bowling Green, Bowling Green State University Library.
Cincinnati, Public Library of Cincinnati and Hamilton County.
Cleveland, Cleveland Public Library, Order Department.
Columbus, Columbus Public Library.
Columbus, Ohio State Library.
Columbus, Ohio State University Libraries, Documents Division.
Dayton, Dayton and Montgomery County Public Library.
Marietta, Marietta College Library.
Springfield, Warder Public Library.
Toledo, Toledo Public Library.
Youngstown, Youngstown Public Library.

OKLAHOMA

Enid, Public Library of Enid and Garfield County.
Norman, University of Oklahoma Library.
Oklahoma City, Oklahoma State Library.
Stillwater, Oklahoma State University Library.
Tahlequah, Northeastern State Teachers College Library.
Tulsa, University of Tulsa Library.

OREGON

Corvallis, Library, Documents Division, Oregon State University.
Eugene, University of Oregon Library.
Portland, Social Science and Science Department, Library Association of Portland.
Salem, Oregon State Library.

PENNSYLVANIA

Allentown, Muhlenberg College Library.
Bethlehem, Lehigh University Library.
Bradford, Carnegie Public Library.
Erie, Erie Public Library.
Harrisburg, Pennsylvania State Library, Documents Section.
Lancaster, Franklin and Marshall College, Fackenthal Library.
Philadelphia, Free Library of Philadelphia, Department of Public Documents.
Pittsburgh, Allegheny Regional Branch Library.
Pittsburgh, Carnegie Library of Pittsburgh, Order Department.
Pittsburgh, University of Pittsburgh, University Library, Documents Department.
Reading, Reading Public Library.
Scranton, Scranton Public Library.
University Park, The Pennsylvania State University Library, Documents Section.
Warren, Warren Library Association.
Wilkes-Barre, King's College Library.
Williamsport, James V. Brown Library.

PUERTO RICO

Mayaguez, Library, Documents Rooms, College of Agriculture.
Rio Piedras, General Library, University of Puerto Rico, Documents and Maps Room.

RHODE ISLAND

Kingston, University of Rhode Island Library.
Providence, Providence Public Library.

SOUTH CAROLINA

Clemson, Clemson College Library.
Columbia, Documents Librarian, Reference Room, McKissick Memorial Library, University of South Carolina.

SOUTH DAKOTA

Brookings, Lincoln Memorial Library, South Dakota State College.
Vermillion, University of South Dakota Library.

TENNESSEE

Chattanooga, Chattanooga Public Library, Government Document Department.
Emphis, Ossitt Reference Library.
Johnson City, East Tennessee State College Library.
Knoxville, University of Tennessee Library.
Nashville, Joint University Libraries.
Nashville, Nashville Public Library.
Nashville, State Library Division, Tennessee State Library and Archives.

TEXAS

Abilene, Hardin Simmons University Library.
Austin, Texas State Library.
Austin, University of Texas Library Documents Acquisition.
Beaumont, Lamar State College of Technology Library.
College Station, Texas A. & M. University Library.
Dallas, Dallas Public Library.
Dallas, Southern Methodist University, Fondren Library.
Denton, North Texas State University Library.
Edinburg, Pan American College Library.
El Paso, El Paso Public Library.
Fort Worth, Fort Worth Public Library.
Fort Worth, Mary Couts Burnett Library, Texas Christian University.
Galveston, Rosenberg Library.
Houston, Houston Public Library.
Kingsville, Texas College of Arts & Industries Library.
Longview, Nicholson Memorial Library.
Lubbock, Texas Technological College Library.
San Antonio, San Antonio Public Library, Business and Science Department.
San Marcos, Southwest Texas State College Library.
Waco, Baylor University Library, Documents Department.

UTAH

Logan, Utah State University of Agriculture & Applied Science Library.
Provo, Brigham Young University Library, Documents Department.
Salt Lake City, University of Utah Library.

VERMONT

Northfield, Norwich University Library.

VIRGINIA

Blacksburg, Documents Department, Virginia Polytechnic Institute Library.
Emory, Emory and Henry College Library.
Norfolk, Norfolk Public Library.
Richmond, Virginia State Library.
University, University of Virginia Library.

WASHINGTON

Olympia, Washington State Library.
Pullman, Washington State University Library, Serial Record Section.
Seattle, Seattle Public Library, Attention Reference Document Assistant.
Seattle, University of Washington Library.
Spokane, Spokane Public Library.
Tacoma, Documents Division, Tacoma Public Library.
Vancouver, Fort Vancouver Regional Library.
Walla Walla, Whitman College Library.

WEST VIRGINIA

Huntington, Marshall University Library, Documents Librarian.
Institute, West Virginia State College Library.
Morgantown, West Virginia University Library.
Salem, Salem College Library.

WISCONSIN

Appleton, Lawrence College Library.
Beloit, Beloit College Libraries.
La Crosse, Public Library.
Madison, University of Wisconsin Library.
Madison, State Historical Society, Acquisitions Section.
Milwaukee, Milwaukee Public Library.
Oshkosh, Library, Wisconsin State College, Oshkosh.
Racine, Racine Public Library.

WYOMING

Cheyenne, Wyoming State Library.
Laramie, University of Wyoming Library, Documents Division.

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